Santucci, S., 67
de Schepper, L., 199
Schroeter, E., 109
Seeboth, A., L119
Seguelond, T., 243
Serpinet, J., 13, 279
Shimizu, K., 263
van Silfhout, A., 1
Sinadinovski, Gj., 53
Smith, G. B., L123
So, F. C. T., 217
Sokołowski, S., 287
Somekh, R. E., L129
Stals, L. M., 199
van Stappen, M., 199
Stetsenko, A. N., 225
Suzaki, Y., 235

Tawada, Y., 253
Taylor, D. M., L141
Thabti, A., 243
Thompson, G. E., 209, 263
Tovazhnyansky, V. L., 225
Tsutsui, T., L135

Wang, Y. G., L149
Wood, G. C., 209, 263
Wu, P. T., 149
Wu, Z.-Q., 77
Wuttke, W., 109

Xu, X., L135

Yamamoto, K., 253
Yan, B., 39
Yang, C., 39
Yoshii, K., 235
Yoshimura, S., L139

Zagal, J. H., 299
Zhao, X.-A., 217
Zubarev, Ye. N., 225

Contents of Vol. 173

ELECTRONICS AND OPTICS

A novel derivative ellipsometric method for the study of the growth of thin films: titanium 1
J. M. M. de Nijs and A. van Silfhout (Enschede, The Netherlands)

METALLURGICAL AND PROTECTIVE COATINGS

Phase transitions in adsorbed layers
X: Application of inverse gas chromatography to the determination of phase diagrams for monolayer films deposited on porous adsorbent surfaces 13
J. Rayss, A. Patrykiejew (Lublin, Poland) and J. Serpinet (Villeurbanne, France)

Reactive evaporation of thin titanium nitride films in ultrahigh vacuum and their friction and wear behavior as a function of contact stress 19
D. E. Peebles and L. E. Pope (Albuquerque, NM, U.S.A.)

Interdiffusion of an Au/Ni/Cr multilayer metallization on silicon substrates. 39
B. Yan, T. Lin, D. Mao and C. Yang (Shanghai, China)

PREPARATION AND CHARACTERIZATION

Chemical deposition of tin(II) sulphide thin films 53
M. Ristov, Gj. Sinadinovski, I. Grozdanov and M. Mitreski (Skopje, Yugoslavia)

Effects of heat treatment and ion doping of indium oxide 59
C. H. Lee, C. V. Kuo (Tainan, Taiwan) and C. L. Lee (Hsinchu, Taiwan)

The crystalline structure of ultrathin gold granular films 67
M. Diociaiuti, P. Picozzi, S. Santucci (L'Aquila, Italy) and L. Paoletti (Rome, Italy)

Effects of ion implantation on the annealing behaviour of amorphous germanium and gold bilayers 77
J.-G. Hou, Z.-Q. Wu and L.-S. Bi (Anhui, China)

Nitruration du titane par plasma haute fréquence d'azote et d'ammoniac 83
M. Kabbaj, M. Gendry, J. Durand and L. Cot (Montpellier, France)

On the use of zinc acetate as a novel precursor for the deposition of ZnO by low-pressure metal–organic chemical vapour deposition 95
O. F. Z. Khan and P. O'Brien (London, U.K.)

Yttrium oxides in vacuum-plasma-sprayed CoNiCrAlY coatings 99
B. Gudmundsson and B. E. Jacobson (Linköping, Sweden)

Position dependences in planar magnetron sputtering of TiN films 109
A. Neidhardt, U. Reinhold, E. Schroeter and W. Wuttke (Zwickau, G.D.R.)

The selective removal of the negative high-resolution photoresist system Ag–As–S 129
R. E. Belford, E. Hajto and A. E. Owen (Edinburgh, U.K.)

The structure of copper layers obtained from electroless plating solutions with and without a polyoxyethylene compound 139
J. E. A. M. van den Meerakker (Eindhoven, The Netherlands)

Identification of interfacial structures in Bi–Ca–Sr–Cu–O thin film 149
W. T. Lin, H. C. Chu, Y. K. Fang, C. Y. Chang (Tainan, Taiwan), P. T. Wu and J. H. Kung (Hsinchu, Taiwan)

LETTERS

Chemical bonding in microcrystalline Si:H:Cl films studied by ion-induced Auger electron spectroscopy. L109
E. Grossman, A. Grill and M. Polak (Beer-Sheva, Israel)

Composition of magnetron-sputtered aluminum alloy films L115
D. R. Liu and K. H. Norian (Bethlehem, PA, U.S.A.)

ELECTRONICS AND OPTICS

Static refractive index of hydrogenated amorphous and polycrystalline silicon between 293 K and 973 K 155
J. P. Ferraton, C. Ance and F. de Chelle (Montpellier, France)

A two-band model of conductivity to interpret chromium layer electron characteristics. 163
E. Idczak (Wrocław, Poland)

The anomalous photovoltaic effect in polycrystalline $AgInTe_2$ thin films 169
S. M. Patel and B. H. Patel (Gujarat, India)

Polarizability of dielectric islands on a substrate 175
R. Atkinson (Belfast, U.K.)

Conductivity, dimensionality and morphology of co-sputtered Pb–Ge films 185
A. D. Inglis, D. Landheer, D. Houghton and R. Packwood (Ottawa, Ontario, Canada)

METALLURGICAL AND PROTECTIVE COATINGS

Initial growth and epitaxy of PVD TiN layers on austenitic steel 199
L. de Schepper, M. D'Olieslaeger, G. Knuyt, L. M. Stals, M. van Stappen, B. Malliet (Diepenbeek, Belgium), J. P. Celis and J. R. Roos (Leuven, Belgium)

PREPARATION AND CHARACTERIZATION

Structural chemistry of anodic alumina 209
I. Farnan, R. Dupree (Coventry, U.K.), Y. Jeong, G. E. Thompson, G. C. Wood (Manchester, U.K.) and A. J. Forty (Stirling, U.K.)

Reactive sputtering of RuO_2 films 217
E. Kolawa, F. C. T. So, W. Flick, X.-A. Zhao, E. T.-S. Pan and M.-A. Nicolet (Pasadena, CA, U.S.A.)

Dislocation mechanisms of epitaxial strain relaxation in Ta/V multilayer films 225
L. S. Palatnik, A. N. Stetsenko, Ye. N. Zubarev, V. L. Tovazhnyansky and A. I. Fedorenko (Kharkov, U.S.S.R.)

Atomic structure of amorphous $Si_{1-x}C_x$ films prepared by r.f. sputtering 235
Y. Suzaki, S. Inoue, I. Hasegawa, K. Yoshii and H. Kawabe (Osaka, Japan)

Preparation and characterization of gallium (III) fluoride thin films 243
A. S. Barrière, G. Couturier, G. Gevers, H. Guégan, T. Seguelond, A. Thabti (Talence, France) and D. Bertault (Gradignan, France)

Physical properties and structure of carbon-rich a-SiC:H films prepared by r.f. glow discharge decomposition 253
K. Yamamoto, Y. Ichikawa, N. Fukada, T. Nakayama and Y. Tawada (Kobe, Japan)

Transmission electron microscopy examination of ultramicrotomed sections of tantalum and its anodic oxide films 263
K. Shimizu, G. E. Thompson, G. C. Wood (Manchester, U.K.), Y. Kurima and K. Kobayashi (Yokohama, Japan)

LANGMUIR–BLODGETT AND RELATED FILMS

Lateral surface potential distribution of a phospholipid monolayer. 269
W. M. Heckl (Garching, F.R.G.), H. Baumgärtner (Neubiberg, F.R.G.) and H. Möhwald (Mainz, F.R.G.)

GENERAL FILM BEHAVIOUR

Phase transitions in adsorbed layers
XI: The condensed-solid to expanded-liquid transition in an *n*-octadecanol monolayer on a silica gel surface 279
A. Patrykiejew, J. Rayss (Lublin, Poland) and J. Serpinet (Villeurbanne, France)

Phase transitions in adsorbed layers
XII: A two-dimensional van der Waal's fluid with softened repulsive interactions 287
P. Borowski, A. Patrykiejew and S. Sokołowski (Lublin, Poland)

Electrocolouring of anodized aluminium with copper: effect of porous and barrier oxide film thicknesses 299
G. Pastore, S. Montes, M. Paez and J. H. Zagal (Santiago, Chile)

LETTERS

Gelatin films with embedded liquid crystals in the conoscopic ray L119
A. Seeboth and H. Hermel (Berlin, G.D.R.)

High resolution studies of columnar growth in obliquely deposited metal films on glass L123
G. Mbise, G. B. Smith and C. G. Granqvist (Gothenburg, Sweden)

A temperature gradient technique for measuring the activation energy for electromigration L129
C. A. Ross, R. E. Somekh and J. E. Evetts (Cambridge, U.K.)

Mixing at the molecular level of two designed azobenzene-linked amphiphiles at the air–water interface L135
X. Xu, M. Era, T. Tsutsui and S. Saito (Kasuga, Japan)

Note on the heteroepitaxial growth of $Ba_{1-x}Sr_x TiO_3$ thin films on MgO L139
K. Fujimoto, S. Yoshimura and K. Kubota (Nishinomiya, Japan)

The effect of water quality on the electrical characteristics of Langmuir monolayers L141
D. M. Taylor, O. N. Oliveira, Jr., and H. Morgan (Bangor, U.K.)

A study of Au/GaAs Schottky barriers with a cesiated interface L149
Y. G. Wang and S. Ashok (University Park, PA, U.S.A.)

AUTHOR INDEX 309